

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A light dispersion filter ~~for applying desired dispersion to an incident optical signal~~, comprising:

three or more optically transparent layers each having a value equal to the value of a product of a refractive index and a thickness of said optically transparent layer, and transmitting light; and

a plurality of partially reflective layers having predetermined reflectivities, and arranged alternately with said optically transparent layers ~~[(,)]~~; and

a reflective mirror for completely reflecting light, said reflective mirror being disposed at a location at which the value of a product of a distance to a light exit plane and the refractive index of a material between said exit plane and said reflective mirror is one-half of a product of the refractive index and thickness of said optically transparent layer,

wherein the reflectivity is highest on a partially reflective layer disposed near the center of said light dispersion filter in a direction of thickness of said light dispersion filter, and the reflectivities of the respective partially reflective layers are gradually lower toward both end faces of said light dispersion filter.

2. – 7. (Canceled).

8. (Original) The light dispersion filter according to claim 1, wherein:

said optically transparent layer is a dielectric substrate; and

said partially reflective layer is a thin film or a multi-layered film composed of a plurality of laminated thin films.

9. (Canceled).

10. (Canceled).

11. (Original) The light dispersion filter according to claim 1, wherein:

said optically transparent layer is a semiconductor substrate; and

said light dispersion filter comprises light amplifying means in said semiconductor substrate for amplifying an incident optical signal.

12. (Canceled).

13. (Canceled).

14. (Original) The light dispersion filter according to claim 1, wherein said optically transparent layers and said partially reflective layers are bonded by an adhesive having the same refractive index as said optically transparent layers.

15. – 34. (Canceled).

35. (Currently Amended) A light dispersion measuring device comprising:
an optical demultiplexer for branching an optical signal;
the a light dispersion filter ~~according to claim 1~~, through which one of the optical signals branched by said optical demultiplexer passes;

the light dispersion filter comprising:

three or more optically transparent layers each having a value equal to the value of a product of a refractive index and a thickness of said optically transparent layer, and transmitting light; and

a plurality of partially reflective layers having predetermined reflectivities, and arranged alternately with said optically transparent layers,

wherein the reflectivity is highest on a partially reflective layer disposed near the center of said light dispersion filter in a direction of thickness of said light dispersion filter, and the reflectivities of the respective partially reflective layers are gradually lower toward both end faces of said light dispersion filter,

a first light receiver for generating an electric signal corresponding to the optical signal which has passed through said light dispersion filter;

a second light receiver for generating an electric signal corresponding to another optical signal branched by said optical demultiplexer; and

a signal differential circuit for generating a difference between the signals generated from said first light receiver and said second light receiver.

36. – 39. (Canceled).